## Chapter 1

# INTRODUCTION

The MS-6199VA ATX VIA mainboard is a high-performance personal computer mainboard based on the Intel® Pentium® II/III processor. The Intel® Pentium® II/III processor supports MMX™ (Multimedia Extension) technology.

The mainboard uses the highly integrated VIA® VT82C693A chipset to support the PCI/ISA and Green standards, and to provide the Host/AGP bridge. TheVIA® VT82C596B chipset integrates all system control functions such as ACPI (Advanced Configuration and Power Interface). The ACPI provides more Energy Saving Features for the OSPM(OS Direct Power Management) function. The VIA® VT82C596B chipset also improves the IDE transfer rate by supporting Ultra DMA 33/66 IDE that transfers data at the rate of 33/66MB/s.

The mainboard also supports the System Hardware Monitor Controller. Its functions include: CPU /power supply/chassis fan revolution detect, CPU/ system voltage monitor, system temperature monitor, chassis intrusion detect and TOP TECH III as an optional function.

## 1.1 Mainboard Features

**CPU**
- Slot 1 for Intel® Pentium® II/III or Celeron™ processor.
- Supports 233MHz, 266MHz, 300MHz, 333MHz, 350MHz, 400MHz, 450MHz, 500MHz, and faster.

**Chipset**
- VIA® VT82C693A chipset + VT82C596B

**FSB (Front Side Bus)**
- 66.6MHz, 100MHz, 133MHz and faster clocks are supported.

**Main Memory**
- Supports six memory banks using three 168-pin unbuffered DIMM.
- Supports a maximum memory size of 1.5G.
- Supports ECC(1-bit Error Code Correct) function.
- Supports 3.3v SDRAM DIMM.

**Slots**
- One AGP slot.
    - AGP specification compliant
    - AGP 66/133MHz 3.3v device support
- Five 32-bit Master PCI Bus slots and two 16-bit ISA Bus slots (wherein one slot is shared).
  *See page 2-34 for further details on PCI slots.
- Supports 3.3v/5v PCI bus Interface.

**On-Board IDE**
- An IDE controller on the VT82C596B Chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA/66 operation modes.
- Can connect up to four IDE devices.

**On-Board Peripherals**
- On-Board Peripherals include:
  - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
  - 2 serial port (COM A + COM B)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 2 USB ports
  - 1 IrDA connector for SIR.
  - 1 Audio port ( Line_Out, Line_In, and Mic_In Jack) and 1 MIDI/ Game Port

**Audio (Optional)**
- Creative® ES1373
  - Running on PCI BUS.
  - 64 Voice and AC3 Capable
  - Support Direct Sound and Direct Sound 3D
  - AC97' Compliant
  - Support SPDIF™ output

**BIOS**
- The mainboard BIOS provides "Plug & Play" BIOS which detects the peripheral devices and expansion cards of the board automatically.
- The mainboard provides a Desktop Management Interface(DMI) function which records your mainboard specifications.
- ACPI(Advanced Configuration and Power Interface) feature.
- Anti-virus BIOS function.
- BIOS Lock function.

**Dimension**
- ATX Form Factor : 30.4cm(L) x 19.2cm(W) x 4 layers PCB
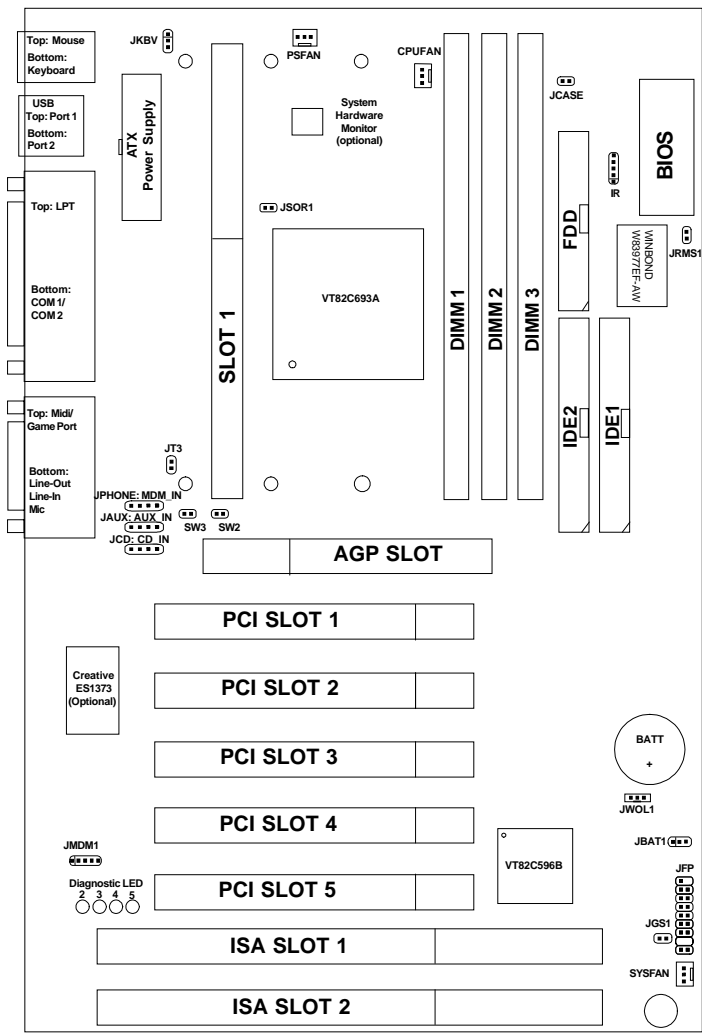
**Mounting**
- 6 mounting holes.

**System Hardware Monitor**
- CPU/Power Supply/Chassis Fan Revolution Detect
- CPU Fan Control detects the CPU temperature, then determine the FAN SPEED, which utilizes PC Alert program (the fan will automatically stop when the system enters suspend mode)
- System Voltage Detect
- Added 5VSB and Battery Voltage Detect
- CPU Overheat Warning.
- Display Actual Current Voltage
- Chassis Intrusion

**Other Features**
- Keyboard Password Wake-Up
- LAN Wake-Up
- Internal/External Modem Wake-Up

## 1.2 Mainboard Layout



# MS-6199 ATX VIA Mainboard